Workshop #2 on Auto DR Load Impact and Cost-Effectiveness

Demand Response Measurement Evaluation Committee (DRMEC)

October 13, 2010

PG&E Energy Center - San Francisco, CA

Purpose of this workshop

- From D. 09-08-027 (DR authorization for 2009-2011)

We direct the utilities to:

(1) jointly hold a public workshop to present and discuss their findings and solicit feedback from the parties and

(2) jointly hold a second public workshop to present proposals based on the results of the first workshop and solicit feedback and other proposals from the parties.

- The first public Auto DR workshop was held September 16, 2010
- The Demand Response Research Center (DRRC) provided an update of OpenADR and a history of AutoDR
- Christensen Associates Energy Consulting presented the results of the 2009 Auto DR Load Impacts and Cost Effectiveness Report

Auto DR recommendations from DRRC

- Migrate existing incentive structure toward more performance-based incentives
  - Based on better estimates
  - Based on embedded rate or contractual provisions
  - Based on regular feedback
- Better define and integrate portfolio of demand response and rate options to provide customers with more clear cut choices
- Utilize OpenADR-AutoDR capability/investment

Auto DR 2009 Impacts & CE report

- Christensen Associates Energy Consulting conducted a load impacts and cost effectiveness study of the 2009 program
- They looked at 177 Auto-DR enabled accounts in three IOU DR programs in 2009
  - CBP, CPP, and DBP
- Total and incremental load impacts were estimated for all DR events that year
- They also developed a CE model framework that was applied to each IOU's DR program

Conclusions from Christensen Report

- Percentage load impacts for Auto-DR customers are quite high
  - Low of 6%, high of 46%
- Load shed tests imply even higher percentage load impacts
  - Customers provide 16% to 82% of load shed test kW across DR programs
- Auto-DR incentives are paid based on the results of the load shed tests
- The difference between estimated load impacts and the load shed test kW values makes it difficult for Auto-DR to be cost effective

Report Conclusions (cont'd)

- Potential causes for the difference between estimated load impacts and load shed test results:
  - Changes in the baseline over time
    - In response to economic conditions
    - Because the customer implements conservation in all hours
  - Difference between load shed test conditions and DR event conditions
  - Small sample sizes
    - Program load impacts can be affected by the behavior of one customer on one event day

Recommendations from the Report

- Re-evaluate cost effectiveness when the sample size (of AutoDR program participants) is larger
  - *The load impact estimates, which are the source of program benefits, are often driven by the behavior of very few customers on very few event days.*
- Revisit the load shed test methodology to ensure that the results reflect DR program load impacts as well as possible
  - *Customer baselines may change over time, making it difficult for some customers to perform up the level of their Auto-DR load shed test.*
- Evaluate Auto DR incentive payment levels

CPUC direction for Auto DR

- The utilities are directed to include proposals based on the workshop findings for funding and incorporating Auto DR into demand response programs in their applications in the Demand Response proceeding for the next 2012-2014 cycle.
- Future Auto DR proposals should leverage applicable Auto DR-related open standards emerging from the federal Smart Grid standards development activities.

Workshop #2 Agenda

- 10:00 - Introduction – DRMEC
- 10:30 - Auto DR program design - joint IOUs
- 11:00 - Auto DR program design - PG&E
- 11:20 - Auto DR program design – SCE
- 11:40 - Auto DR program design - SDG&E
- 12:00 - Comments and feedback
- 12:30 – Meeting adjourn